R.46

X2 CLASS (EN132400) - MKP Series

SELF-HEALING PROPERTIES

Typical applications: interference suppression and «across-the-line» applications. Suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.

PRODUCT CODE: R46

Note: R.46 series has replaced the 1.40 series and 1.47 series. For new design we suggest the use of the R.46 series.

GENERAL TECHNICAL DATA

Dielectric: polypropylene film.

Plates: metal layer deposited by evaporation under vacuum.

Winding: non-inductive type.

Leads: tinned wire.

Protection: plastic case, thermosetting resin filled. Box material is solvent resistant and flame retardant according to UL94 V0.

Marking: Manufacturer's logo, series, capacitance, tolerance, rated voltage, capacitor class, dielectric code, climatic category, passive flammability category, manufacturing date code, approvals, manufacturing plant.

Climatic category: 40/110/56 IEC 60068-1

Operating temperature range: -40 to +110°C

Related documents: IEC 60384-14, EN 132400.

ELECTRICAL CHARACTERISTICS

Rated voltage (VR): 275Vac/300Vac; 50/60Hz

Capacitance range: 0.01mF to 5.6mF

Capacitance values: E6 series (IEC 60063 Norm).

Capacitance tolerances (measured at 1 kHz): ± 10% (K); ± 20% (M).

Dissipation factor (DF): tan δ × 10^-4 at +25°C ± 5°C: ≤ 10 (6)* at 1kHz

* Typical value

Insulation resistance:

Test conditions: Temperature: +25°C ± 5°C

Voltage charge time: 1 min

Voltage charge: 100 Vdc

Performance:

<table>
<thead>
<tr>
<th>Ø d ± 0.05</th>
<th>p ≤ 15</th>
<th>22.5 ≤ p ≤ 27.5</th>
<th>p = 37.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 or 0.8</td>
<td>0.6</td>
<td>0.8</td>
<td>1</td>
</tr>
</tbody>
</table>

* See size table.

All dimensions are in mm.

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions 1st

Temperature: +40°C ± 2°C

Relative humidity (RH): 93% ± 2%

Test duration: 56 days

Test conditions 2nd

Temperature: +60°C ± 2°C

Relative humidity (RH): 95% ± 2%

Test duration: 500 hours

Performance:

Dielectric strength: no dielectric breakdown or flashover at 4.3 × VR (d.c.)/1 min

Capacitance change |ΔC/C|: ≤ 5%

Insulation resistance: ≥ 50% of initial limit.

Endurance:

Test conditions

Temperature: +110°C ± 2°C

Test duration: 1000 h

Voltage applied: 1.25 × VR + 1000Vac 0.1 s/h

Performance:

Dielectric strength: no dielectric breakdown or flashover at 4.3 × VR (d.c.)/1 min

Capacitance change |ΔC/C|: ≤ 10%

Insulation resistance: ≥ 50% of initial limit.

Resistance to soldering heat:

Test conditions

Solder bath temperature: +260°C ± 5°C

Dipping time (with heat screen): 10 s ± 1 s

Performance:

Capacitance change |ΔC/C|: ≤ 2%

Winding scheme

single sided metallized polypropylene film
X2 CLASS (EN132400) - MKP Series

METALLIZED POLYPROPYLENE FILM CAPACITOR

SELF-HEALING PROPERTIES

APPROVALS

Table 1 (For more detailed information, please refer to page 16)

<table>
<thead>
<tr>
<th>Standard packaging style</th>
<th>Lead length (mm)</th>
<th>Taping style</th>
<th>P2 (mm)</th>
<th>Fig. (No.)</th>
<th>Pitch (mm)</th>
<th>Ordering code (Digit 10 to 11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMO-PACK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REEL ⊙355mm</td>
<td>12.70</td>
<td>18.05</td>
<td>2</td>
<td>10.0/15.0</td>
<td>22.5</td>
<td>DD</td>
</tr>
<tr>
<td>REEL ⊙500mm</td>
<td>12.70</td>
<td>19.05</td>
<td>2</td>
<td>10.0/15.0</td>
<td>22.5/27.5</td>
<td>CK</td>
</tr>
<tr>
<td>Loose, short leads</td>
<td>25</td>
<td>19.05</td>
<td>2</td>
<td>10.0/15.0</td>
<td>22.5</td>
<td>00</td>
</tr>
<tr>
<td>Loose, insulated lead</td>
<td>30</td>
<td>19.05</td>
<td>2</td>
<td>10.0/15.0</td>
<td>22.5/27.5</td>
<td>51</td>
</tr>
<tr>
<td>Loose, insulated flexible leads</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>52</td>
</tr>
</tbody>
</table>

Note: Ammoni-pack is the preferred packaging for taped version.

Typical values:

\[ Z = f(f) \text{ (lead length 2 mm)} \]
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METALLIZED POLYPROPYLENE FILM CAPACITOR

SELF-HEALING PROPERTIES

Typical applications: interference suppression and "across-the-line" applications. Suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.

PRODUCT CODE: R46

NEW 125°C

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R): 275Vac/300Vac; 50/60Hz
Capacitance range: 0.01μF to 1μF

TEST METHOD AND PERFORMANCE

Endurance:
Test conditions:
Temperature: +125°C ± 2°C
Test duration: 1000 h
Voltage applied: 1.25 x V_R + 1000Vac 0.1 s/h
Performance:
Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min
Capacitance change |ΔC/C|: ≤ 10%
Insulation resistance: ≥ 50% of initial limit.

APPROVALS

ENEC-IMO (E 60384-14) Class X2 File No.CA08.00063
CAN/CSA E384-14-95 Across-the-line File No.1271537 (LR83890) pending
UL 1483(Class 20 Vac) File No.E85238

CSA and UL 1414 for 250Vac only.
According to IEC 60065.

(*) ENEC mark has replaced all the following European National marks:

For all other characteristics or performance see page 115.